

# Salud America!

## The Robert Wood Johnson Foundation Research Network to Prevent Obesity Among Latino Children

### RESEARCH BRIEF

December 2011

# Exposure to Recreation Center Increases Use by Latino Families with Young Children

## Introduction

Obesity rates have tripled among children and adolescents over the past 30 years, and Latino children are at higher risk than those of other racial or ethnic groups.<sup>1,2,3,4,5</sup>

Additionally, physical activity rates decline dramatically from childhood to adolescence, a decline that continues with age and that holds true not just for Latinos but for the entire U.S. population.<sup>6,7,8,9,10,11,12</sup> Because most Americans still do not meet activity recommendations, policymakers have established goals to increase the number of people who lead active, healthy lives.<sup>13,14</sup> However, Latinos in particular

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### PEER REVIEW

Peer review for this research brief was conducted by *Salud America!* National Advisory Committee Member James Sallis, Ph.D., professor of psychology at San Diego State University and director of Active Living Research, an RWJF national program.

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<sup>1</sup> Ogden CL, Carroll MD, Curtin LR, Lamb MM and Flegal KM. "Prevalence of High Body Mass Index in US Children and Adolescents, 2007–2008." *Journal of the American Medical Association*, 303(3): 242–249, 2010.

<sup>2</sup> Ogden C, et al. Mean body weight, height, and BMI US 1960-2002. *Advance Data (CDC)*, 347: 1-18, 2004.

<sup>3</sup> Suminski RR, et al. "Early identification of Mexican American children who are at risk for becoming obese." *Intl Journal of Obesity*, 23: 823-29, 1999.

<sup>4</sup> Flegal K, et al. "Prevalence and trends in obesity." *JAMA*, 303 (3): 235-241, 2010.

<sup>5</sup> Stovitz S, et al. "Participation in physical activity among normal and overweight Hispanic and Non-Hispanic white adolescents." *J of School Health*, 78 (1): 19-21, 2008.

<sup>6</sup> Allen M, et al. "Adolescent participation in preventive health behaviors, physical activity, and nutrition: differences across immigrant generations for Asians and Latinos compared to whites." *Am J PH*, 97 (2): 337-43, 2007.

<sup>7</sup> Berrigan D, et al. "Physical activity and acculturation among adult Hispanics in the United States." *Research Quarterly for Exerc and Sport*, 77(2): 147-157, 2006.

<sup>8</sup> Gordon-Larsen P, et al. "Determinants of adolescent physical activity and inactivity patterns." *Pediatrics*, 105(6): 105-113, 2000.

<sup>9</sup> Lee SH, et al. "Ethnic differences in exercise and leisure time activity among midlife women." *J of Adv Nursing*, 66(4): 814-27, 2009.

<sup>10</sup> Neighbors C, et al. "Leisure time physical activity disparities among Hispanic subgroups in the United States." *Am J of Publ Health*, 98 (8): 1460-1464, 2008.

<sup>11</sup> King AC, et al. "Determinants of physical activity and interventions in adults." *Med Sci Sports Exerc*, 24 (6): 221-36, 1992.

<sup>12</sup> He X, et al. "Differences in leisure-time, household, and work-related physical activity by race, ethnicity, and education." *J Gen Int Med*, 20(3): 259-66, 2004.

<sup>13</sup> American Academy of Pediatrics, 2010, <http://www.aap.org/obesity/index.html>.

<sup>14</sup> Koplan J. "Preventing childhood obesity: Health in balance: executive summary." *J of the Am Dietetic Assoc*, 105 (1): 131-8, 2005.



still face many barriers to physical activity,<sup>8,15,16,17,18,19,20,21,22,23,24,25,26,27,28</sup> with safety and access to facilities chief among them.<sup>8,11,15,16,18,19,20,21,22,23,24,25,26,27,28</sup> In one report, obesity rates were 20 percent to 60 percent higher among children living in neighborhoods perceived as unsafe, or those with poor housing and no sidewalks.<sup>15</sup>

Built environments—man-made surroundings such as sidewalks, community recreation centers, schools, grocery stores, roads and parks—may be either barriers to or facilitators of healthy lifestyles. For example, children tend to weigh more when they live closer to fast-food restaurants.<sup>29</sup> Conversely, adolescents and adults who live near a community recreation center tend to do more moderate physical activity.<sup>8,25,30,31</sup> Currently, there is no definitive research showing how efforts to increase use of recreation centers within one's built environment might influence physical activity for Latino families, a population at high risk for obesity.

## PRELIMINARY RESEARCH RESULTS

Our *Salud America!* pilot research project, "Increasing Access to Physical Activity and Use of Community Recreation Centers by Latino Families to Reduce Pediatric

<sup>15</sup> Singh G, et al. "Neighborhood socioeconomic conditions, built environments, and childhood obesity." *Health Affairs*, 29 (No. 3): 503-512, 2010.

<sup>16</sup> Van Duyn M, et al. "Adapting evidence based strategies to increase physical activity among African American, Hispanic, Hmong, and Native Hawaiians: social marketing approach." *Preventing Chronic Disease*, 4 (4): 1-11, 2007.

<sup>17</sup> Cutts BB, et al. "City structure, obesity, and environmental justice: an integrated analysis of physical and social barriers to walkable streets and park access." *Soc Sci Med*, 69 (9): 1314-22, 2009.

<sup>18</sup> Trost S, et al. "Correlates of adults' participation in physical activity: review and updates." *Med Sci Sports Exerc*, 34: 1996-2001, 2002.

<sup>19</sup> Sallis J, et al. "Environmental and policy interventions to promote physical activity." *Am J Prev Med*, 15(4): 379-97, 1998.

<sup>20</sup> Salmon J, et al. "Physical activity and sedentary behavior: population based study of the barriers, enjoyment, and preference." *Health Psych*, 22(2): 178-188, 2003.

<sup>21</sup> Martinez S, et al. "Individual, social, and environmental barriers to and facilitators of physical activity among Latinas living in San Diego County." *Fam Com Health*, 32(1): 22-33, 2009.

<sup>22</sup> Sallis J, et al. "Perceived environmental predictors of physical activity over 6 months in adults: activity counseling trial." *Health Psych*, 26 (6): 701-9, 2007.

<sup>23</sup> King A, et al. "Personal and environmental factors associated with physical inactivity among different racial-ethnic groups of US middle aged and older aged women." *Health Psych*, 19 (4): 354-364, 2000.

<sup>24</sup> Cronan M, et al. "Physical activity patterns and preferences among Latinos in different types of public parks." *J Phys Act Health*, 5 (6): 894-908, 2008.

<sup>25</sup> Babey S, et al. "Physical activity among adolescents: when do parks matter?" *Am J Prev Med*, 34 (4): 345-348, 2008.

<sup>26</sup> Richmond T, et al. "Can neighborhoods explain racial/ethnic differences in adolescent inactivity?" *Intl J of Ped Obesity*, 2(4): 202-10, 2007.

<sup>27</sup> Chatterjee N, et al. "Perspectives on obesity and barriers to control from workers at a community center serving low-income Hispanic children and families." *J Comm Health Nurs*, 22(1): 23-36, 2005.

<sup>28</sup> Snethen J, et al. "Addressing childhood overweight: strategies learned from one Latino community." *Transcult Nurs*, 18(4): 2007, 366-72.

<sup>29</sup> Oreskovic N, et al. "Obesity and the built environment among Massachusetts children." *Clinical Pediatrics*, 904-912, 2009.

<sup>30</sup> Grow HM, et al. "Where are youth active? Roles of proximity, active transport, and built environments." *Med Sci Sports Exerc*, 40: 2071-2079, 2008.

<sup>31</sup> Gordon-Larsen P. "Inequality in the built environment underlies key health disparities in the physical activity." *Pediatrics*, 117: 417-24, 2006.

Obesity,” assessed how exposure to a community recreation center affects whether or not Latino families with young children use the center for physical activity. The assessment was conducted one year after the families participated in a culturally-relevant healthy-lifestyles program conducted at the recreation center.

Our study population consisted of 132 parents self-identified as Latino, paired with their child who was 3 to 5 years old. Sixty-six of the pairs received a 12-week parent-child intervention that included access to physical activity resources via center memberships for the whole family. The memberships included free entrance to the center’s fitness room and a 50 percent discount on the cost of swimming classes (this group, exposed to using their built environment to increase physical activity, is henceforth referred to as the “exposed group”). The other pairs were matched to the exposed group’s residential zip code and child’s age, but were not made aware of center programming, nor given any information regarding physical activity opportunities offered through the center (henceforth referred to as the “unexposed” group). Both groups had access to the same community recreation centers.

Through a questionnaire, parents reported whether their families had access to the center and if so whether they used it for physical activity. The center had several different resources to support physical activity, including: walking track, swimming pool, playground, fitness center, table tennis, bike path, team sports and aerobics classes.<sup>32,33</sup> We found that:

- **Programmed exposure to a community recreation center led to self-reported increases in physical activity use one year later by Latino parents and their children.** Almost two-thirds (65%) of the exposed group reported at least monthly use of a recreation center for physical activity over the prior year, whereas only one-third (34%) of the unexposed group did, even though they had the same geographic access to centers. Nearly half the parents in the exposed group reported weekly use of a center, while more than half of unexposed parents reported never using any center. About 24 percent of exposed families (parents with their young children) reported more than weekly use of a center for physical activity, compared to only 15 percent of the unexposed group. Fewer than 11 percent of exposed families never used the center, while the vast majority of unexposed families (71%) never did. Among those reporting use of the recreation center, the top three parent-used activities were the walking track (63%), fitness center (20%), and swimming pool (17%). Both parent and child most engaged in the walking track (53%), playground (48%) and pool (17%).

<sup>32</sup> Kirtland K, et al. “Environmental measures of physical activity supports perception versus reality.” *Am J Prev Med*, 24 (4): 323-331, 2003.

<sup>33</sup> Bedimo-Rung A, et al. “The Significance of parks to physical activity and public health.” *Am J Prev Med*, 28: 159-168, 2005.

Frequency of Recreation Center Use for Physical Activity by Latino Parents: Exposed Vs. Unexposed Groups		
How often do you use a recreation center by yourself?	Exposed (%)	Non-exposed (%)
Less than once/month	34.85	66.15
Greater than once/month	65.15	33.85

Frequency of Recreation Center Use for Activity by Latino Parents with Their Children: Exposed Vs. Unexposed Groups		
How often do you go with your child?	Exposed (%)	Non-exposed (%)
Everyday	1.5	1.5
>Once/week	24.3	13.9
Once/week	19.7	7.7
>Once/month	16.7	1.5
Once/month	27.2	4.6
Never	10.6	70.8

## Conclusion and Policy Implications

This study demonstrated that exposure to routine use of recreation centers by Latinos, a population at high risk for overweight and obesity, led to sustained use for physical activity one year later by both parents and their young children. As activity habits set in early childhood can profoundly influence lifelong trajectories for health,<sup>34</sup> healthy lifestyle programs targeted at children as young as preschool-age have enormous potential to improve lifelong health. Long-term benefits include obesity prevention and optimal cognitive and physical development.

Our findings suggest an effective, low-cost approach that could be used to promote Latino families' use of recreation facilities for increased physical activity. Policymakers should be aware that building or renovating a center may not be the only step needed to support a community's healthy lifestyle—creating programs that encourage families to “walk through the door” and learn how to use a community recreation center can lead to sustainable behavior change to support improved health through routine physical activity.

<sup>34</sup> Olshansky SJ, Passaro DJ, Hershow RC, et al. “A potential decline in life expectancy in the United States in the 21st century.” *N Engl J Med*, 352(11):1138-1145, 2005.

To continue the evidence-based conversation on what works to address the growing Latino childhood obesity epidemic, the authors shared our preliminary results with the Metro Parks and Recreation Board of Nashville, Tenn., the Mayor's Council on Child Wellness, and key community and policymaking partners. These findings may impact local policies on the use of recreational center resources to support increased physical activity among Latino families who live close to the centers. Following just these early conversations about our findings, local community recreation centers already have begun translating their materials into Spanish and increasing their programming for Latino families with young children.